

Claims

1. A structural automotive door body, comprising:
an inner sheet metal layer, the inner sheet metal layer including a latch mounting surface and at least one hinge mounting surface;
an outer sheet metal layer; and
a structural reinforcement member disposed between the inner and outer sheet metal layers to reinforce the inner and outer sheet metal layers and providing at least one hinge reinforcement and a latch reinforcement.
2. A structural automotive door body according to claim 1, wherein said structural reinforcement member includes a side impact beam.
3. A structural automotive door body according to claim 1 or claim 2, wherein said inner sheet metal layer presents a substantially U-shaped structure and said structural reinforcement member includes a top member that abuts the outer panel and extends thereacross adjacent the open portion of said U-shaped structure.
4. A structural automotive door body according to any of claims 1 – 3, wherein said structural reinforcement member includes a bottom cross-member that abuts and supports the inner and outer sheet metal layers.
5. A structural automotive door body according to any of claims 1 – 4, wherein said structural reinforcement member is welded to said inner sheet metal layer.
6. A structural automotive door body according to claim 5, wherein said outer sheet metal layer is hemmed to said inner sheet metal layer.
7. A structural automotive door body according to claim 1, wherein said structural reinforcement member consists essentially of top, middle and

bottom cross-members and contiguous side peripheries, said top member reinforcing said outer panel, said middle cross member extending between said side peripheries to function as a side impact beam, said bottom cross-member abutting and reinforcing said inner and outer sheet metal layers; and wherein said side peripheries include at least one hinge reinforcement and a latch reinforcement.

8. A structural automotive door body, comprising:
- an inner sheet metal layer defining a substantially U-shaped structure;
 - an outer sheet metal layer;
 - at least one of the inner and outer sheet metal layers including a latch mounting surface and at least one hinge mounting surface;
 - a structural reinforcement member disposed between the inner and outer sheet metal layers, said member comprising top, middle and bottom cross-members and contiguous side peripheries, wherein:
 - said top member abuts and extends across said outer sheet metal layer adjacent the open, top portion of said U-shaped structure;
 - said middle cross member extends between said side peripheries to function as a side impact beam;
 - said bottom cross-member abuts and supports said inner and outer sheet metal layers; and
 - said side peripheries include at least one hinge reinforcement and a latch reinforcement.

9. A door reinforcement member for disposition between inner and outer sheet metal layers of an automotive door, said reinforcement member comprising top, middle and bottom cross-members and contiguous side peripheries, wherein:
- said top member reinforces said outer panel;
 - said middle cross member extends between said side peripheries to function as a side impact beam;

said bottom cross-member abuts and supports said inner and outer sheet metal layers; and

said side peripheries include at least one hinge reinforcement and a latch reinforcement.

10. A door assembly, comprising:

an inner sheet metal layer defining a substantially U-shaped structure, the inner sheet metal layer including a latch mounting surface and at least one hinge mounting surface;

an outer, substantially planar, sheet metal layer;

a structural reinforcement member disposed between the inner and outer sheet metal layers for reinforcing the inner and outer sheet metal layers and providing at least one hinge reinforcement and a latch reinforcement;

a carrier assembly, including a belt-line loading member connected to a non-structural hardware carrier having at least a window regulator mounted thereon, said carrier assembly being mounted to at least the structural reinforcement member and covering the U-shaped area; and

a trim component for covering said carrier assembly.

11. A door assembly according to claim 9, wherein said hardware carrier includes a secondary trim component which provides a shelf structure for a map pocket and said trim component includes a wall for said map pocket.

12. A door assembly according to claim 9 or 10, wherein said window regulator includes at least one rail having one end mounted to said belt-line loading member and means for adjusting the lateral and vertical position of the other end of said at least one rail.